

REMARKS

Claims 21-40 are pending in the above-identified application of which claim 21 is independent.

Rejections under 35 U.S.C. 112

The examiner rejected claims 21-40 under 35 U.S.C. 112 as being indefinite. In the rejection the examiner stated that "it is unclear how the outer layer can be in contact with but not secured to the inner most layer...". The Applicant disagrees. As explained in the application:

It is also easy to make the impact resistance of the pipe fitting extremely good. When the different layers are not attached to each other, the pipe fitting is very resistant to shear stress. This is because the surfaces that are moving/separate relative to each other transfer forces more flexibly and more advantageously. The different layers of the pipe fitting can be formed at different times, because it is not desirable that the different layers become attached to each other. Hence, forming the production process of the pipe fitting is reasonably simple. Further, the material of the innermost layer can be selected to be rather hard, whereby the outer layer is not easily attached to the hard material. The material of the inner layer is preferably very hard in order for it to bore into the softer inner wall of the pipe to be fitted upon implementation of the fitting, and to form a tight fitting. Forming a stop member of the end of the outer layer makes the connecting of the pipe to the pipe fitting easy, and thus, a tight and reliable fitting is ensured. In addition, since the end of the outer layer functions as the stop member, no other stop member is required that would make it difficult to keep the system clean, for instance. (paragraph 0008)

As explained in the applicant's specification, the layers are in contact but not attached to each other such that the surfaces of the outer and inner layers can move relative to one another. As such, Applicants believe that the claims particularly point out and distinctly claim the subject matter of the invention. Applicants, therefore, request that the rejection of claims 21-40 under 35 U.S.C. 112 be withdrawn.

Rejections under 35 U.S.C. 102 and 103

The examiner rejected claims 21-23, 25-26, 29-31 and 37-40 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,220,634 to Burrowes. The examiner also rejected claims 21, 32 and 34-36 under 35 U.S.C. §102(b) as being anticipated by

U.S. Patent No. 5,743,569 to Deters et al. Further, the examiner rejected claims 21 and 27-28 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,183,299 to Hallestrom et al. The examiner rejected claim 24 under 35 U.S.C. §103(a) as being unpatentable in view of Burrowes, and rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable in view of Deters.

Independent claim 21 recites a pipe fitting having an innermost layer and an outer layer where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other.” As explained in the application:

... When the different layers are not attached to each other, the pipe fitting is very resistant to shear stress. This is because the surfaces that are moving/separate relative to each other transfer forces more flexibly and more advantageously... (paragraph 0008)

In contrast to the applicant’s claimed invention, none of Burrowes, Deters or Hallestrom, alone or in any reasonable combination, discloses a pipe fitting having an innermost layer and an outer layer where “the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other.”

Burrowes

Burrowes describes a branched hose construction that includes an insert 11 made of a rigid material onto which a hose 20 can be placed (FIG. 2, and col. 2, lines 41-52). In Burrowes, a saddle 30 formed of a rubber composition is molded around the junction of the hoses and the insert 11 (col. 3, lines 12-18).¹ In the office action dated July 11, 2007, the examiner states:

¹ Applicants maintain that the saddle 30 is “secured” to the insert 11 by way of the molding (see, remarks in reply to office action dated June 15, 2007). Applicants also maintain that Burrowes fails to disclose or suggest a pipe fitting in which “the outer layer is in contact with but not secured to the innermost layer” as recited in claim 21.

...the materials of the different layers are selected in such a way that the outer layer is in contact with but not secured (no cross-linking) to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other (the outer layer is elastomeric and the interior is plastic, so the outer layer could stretch and deform relative to the plastic interior). (emphasis added, Office Action, page 3)

As noted by the examiner, since the saddle 30 is formed of an elastomeric material, the saddle 30 could theoretically be moved relative to the plastic insert 11 by stretching and deforming the saddle layer 30. However, since stretching and deformation would be necessary to move the saddle layer 30, the surfaces of the saddle layer 30 and the insert 11 are not able to move relative to each other. Rather, the surface of the saddle layer 30 would be deformed prior to movement of the saddle layer 30. In contrast, in the applicant's claimed pipe fitting, the surfaces of the innermost layer and the outer layer are able to move relative to each other without deformation of the layers because the outer layer is in contact with but not secured to the innermost layer.

For at least these reasons, we submit that Burrowes does not teach a pipe fitting having an innermost layer and an outer layer where "the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other," as recited in claim 21.

Deters

Deters describes "devices used in connecting and joining a flexible hose, to another hose or a fitting particularly permanent attachment [sic] of one or more hoses" (col. 1, lines 6-10). Deters' device includes a rigid inner connector 15 and a rigid outer connector 18 molded in place about the inner connector 15 (FIG. 1, col. 2, lines 24-31). Deters describes frangible sections in the outer connector 18 that enable fracturing of the outer connector 18 if it becomes necessary to remove one of the hoses (col. 2, lines 32-58). With respect to the frangible nature of the outer connector 18, the examiner states:

The Examiner believes that the outer layer of Deters is no more 'secured' to the inner layer than the outer layer to the inner layer of the present invention as the outer layer of Deters is frangible and separable from the outer surface of the inner layer 25.

Since Deters' outer layer must be broken in order to be removed, regardless of whether the connectors are secured to one another,² the surfaces of the inner connector and outer connector are not able to move relative to each other. Rather, the contact between the outer and inner connectors 15 and 18 is severed when the outer connector is broken for removal. For at least these reasons, we submit that Deters does not teach a pipe fitting having innermost and outer layers where "the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other," as recited in amended claim 21.

Hallerstrom

Hallerstrom does not relate pipe fitting for connecting at least two pipes as recited in claim 1. Rather, Hallerstrom describes an insulated pipe for transporting and insulating pipes or fluids (Abstract). In addition, the examiner referred to the layer 13 as corresponding to the innermost layer recited in claim 21 and layer 11 as corresponding to the outermost layer recited in claim 21. However, layers 11 and 13 are connected by a polyurethane foam. As such, 11 and 13 are tightly attached and are not able to move relative to each other. As such, the applicant submits that Hallerstrom does not disclose or suggest a pipe fitting having innermost and outer layers where "the outer layer is in contact with but not secured to the innermost layer, such that the surfaces of the innermost layer and the outer layer are able to move relative to each other," as recited in amended claim 21.

Claims 22-40 depend from independent claim 21, and are therefore patentable for at least the same reasons as applicant's independent claim 21.

Conclusion

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement

² Applicants maintain that since the rigid outer connector 18 is molded in place about the rigid inner connector 15, the connector 18 is "secured" to the inner connector 15 (see, remarks in reply to office action dated June 15, 2007).

Applicant(s) :
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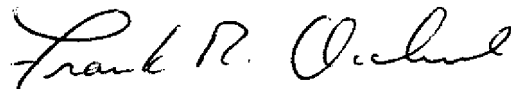
Attorney Docket No.: 46401-014US1
Client Ref. No.: 2011810US

with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

The extension fee in the amount of \$120 is being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other required fees to deposit account 50-4189, referencing attorney docket number 46401-014US1.

Respectfully submitted,

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